

Inspection Requirements for Mobile Cranes

Key Concepts:

- OSHA requirement concerning mobile crane inspections
- Crane inspection types
- Inspection records
- How to conduct a mobile crane inspection
- Basic crane inspection component list

OSHA Requirements Concerning Crane Inspections

- Competent Person needs to do inspection
- Correct any deficiencies immediately
- Maintain inspection records

United States

OSHA

Occupational Safety & Health Administration
U.S. Department of Labor



Crane Inspection Types

Frequent

- Daily to monthly intervals.
- Performed at the start of each shift.
- Focuses on components that may change from day to day.

Periodic

- 1 to 12 month intervals.
- Includes items listed in the daily inspection as well as; structural defects, excessive wear, and hydraulic or air leaks.

Crane Inspection Records

- Date of Inspection
- Signature of person conducting inspection
- Serial number; or other identifier



Conducting a Mobile Crane Inspection

Consider the following when inspecting cranes:

- Request for and review all inspection and maintenance documents.
- Conduct a walk-around.
- Ask the operator, ground crew (riggers), and/or supervisors appropriate questions.
- Check crane set up and stability.

Conducting a Mobile Crane Inspection

- Pre-Inspection
 - ◆ Operator Qualifications
 - ◆ Crane Records
- Crane Set-Up
 - ◆ Leveling
 - ◆ Outriggers
 - ◆ Stability
 - ◆ Structural Integrity
- Load Charts
 - ◆ Availability
 - ◆ Correct Use



Crane Inspection Components

- Manufacturers' manuals
- Exposed moving parts
- Swing radius
- High voltage warning signs
- Boom stops
- Jib stops
- Boom angle indicators
- Boom hoist disconnects
- Anti-two blocking device
- Hydraulic functions
- Leveling
- Sheaves
- Drum lagging and flanges
- Boom assembly
- Hooks
- Hydraulic hoses & fittings
- Outriggers
- Load charts
- Wire rope (running & standing)
- Operator's compartment
- Access ladders

Manufacturer's Operating and Maintenance Manuals



Exposed Moving Parts



Swing Radius



High Voltage Warning Signs



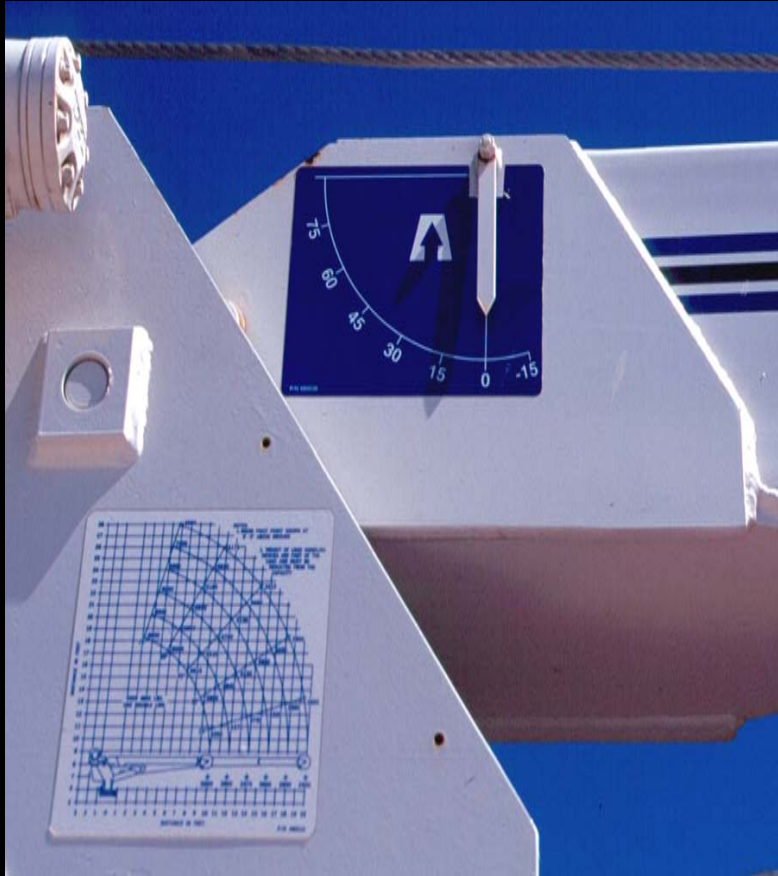
Boom stops



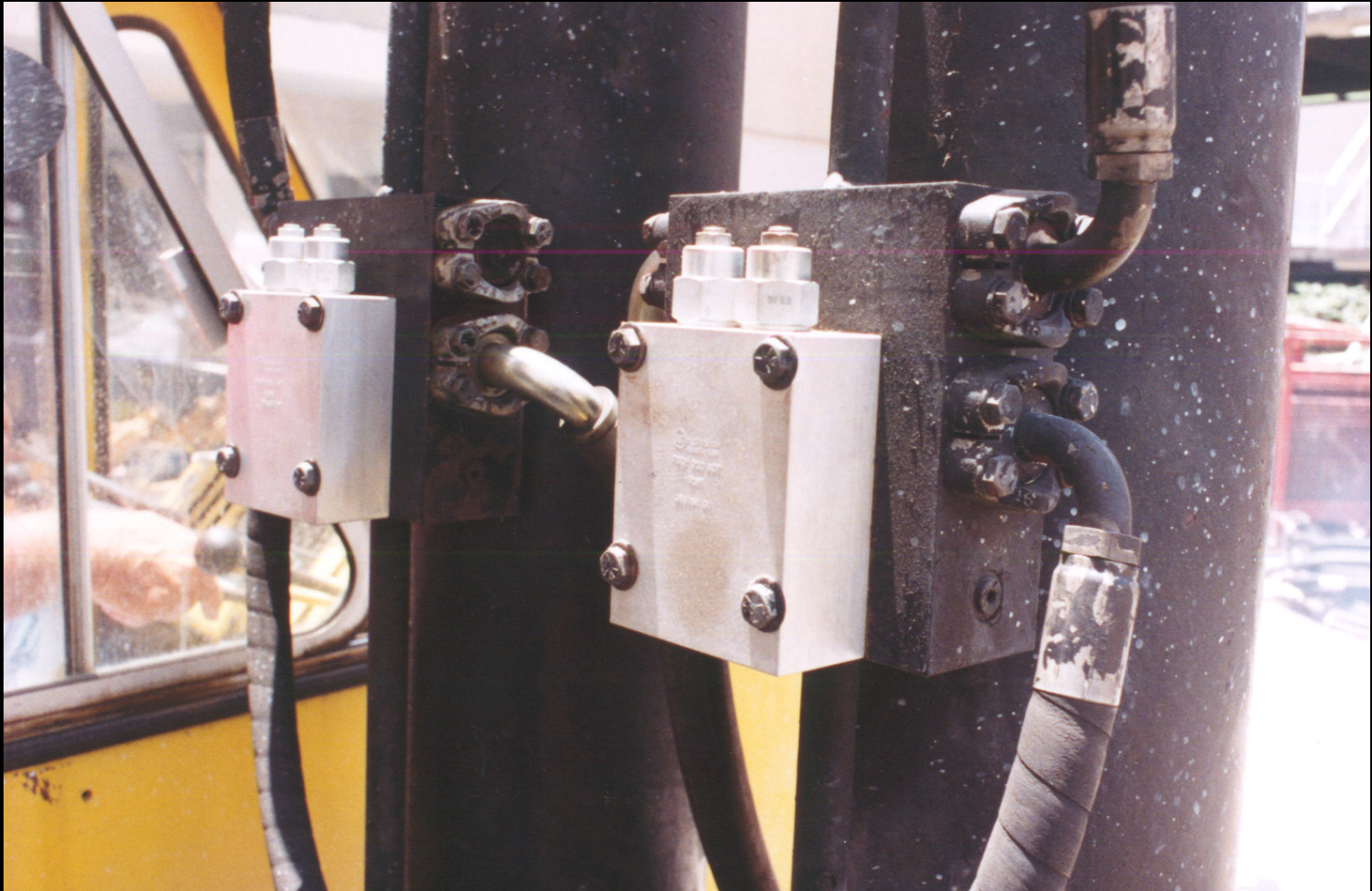
Jib stops



Boom Angle Indicators



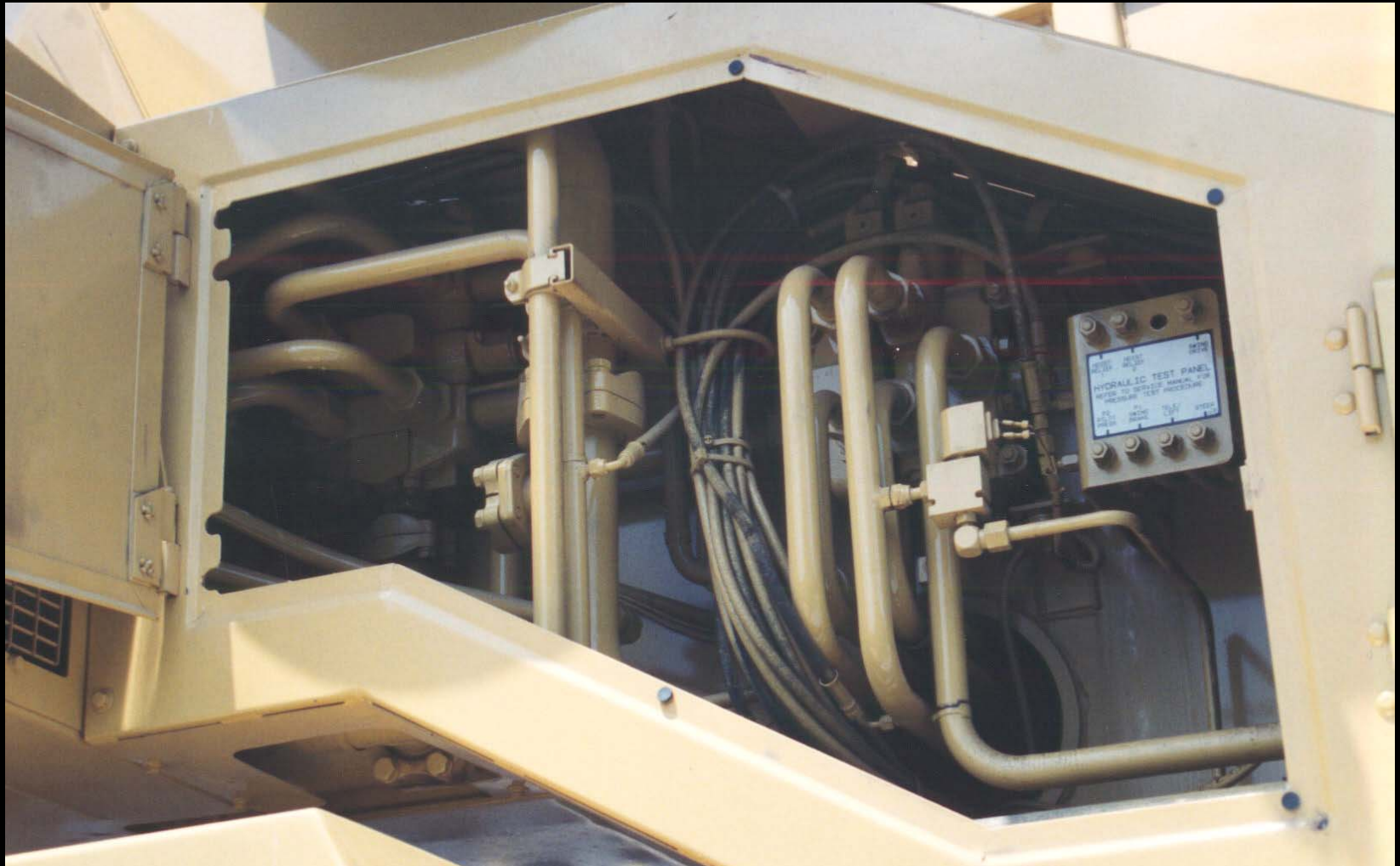
Boom Hoist Disconnects



Anti-Two Block Devices



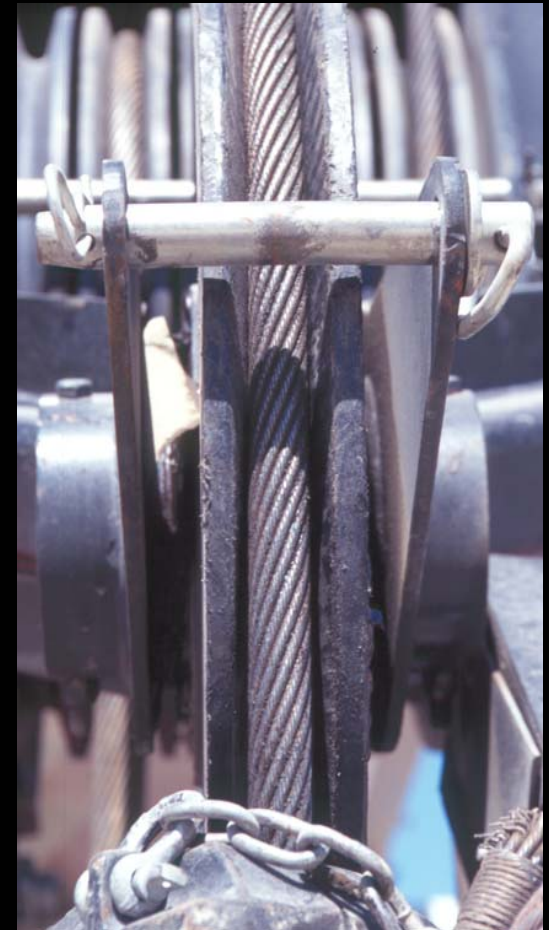
Hydraulic Functions



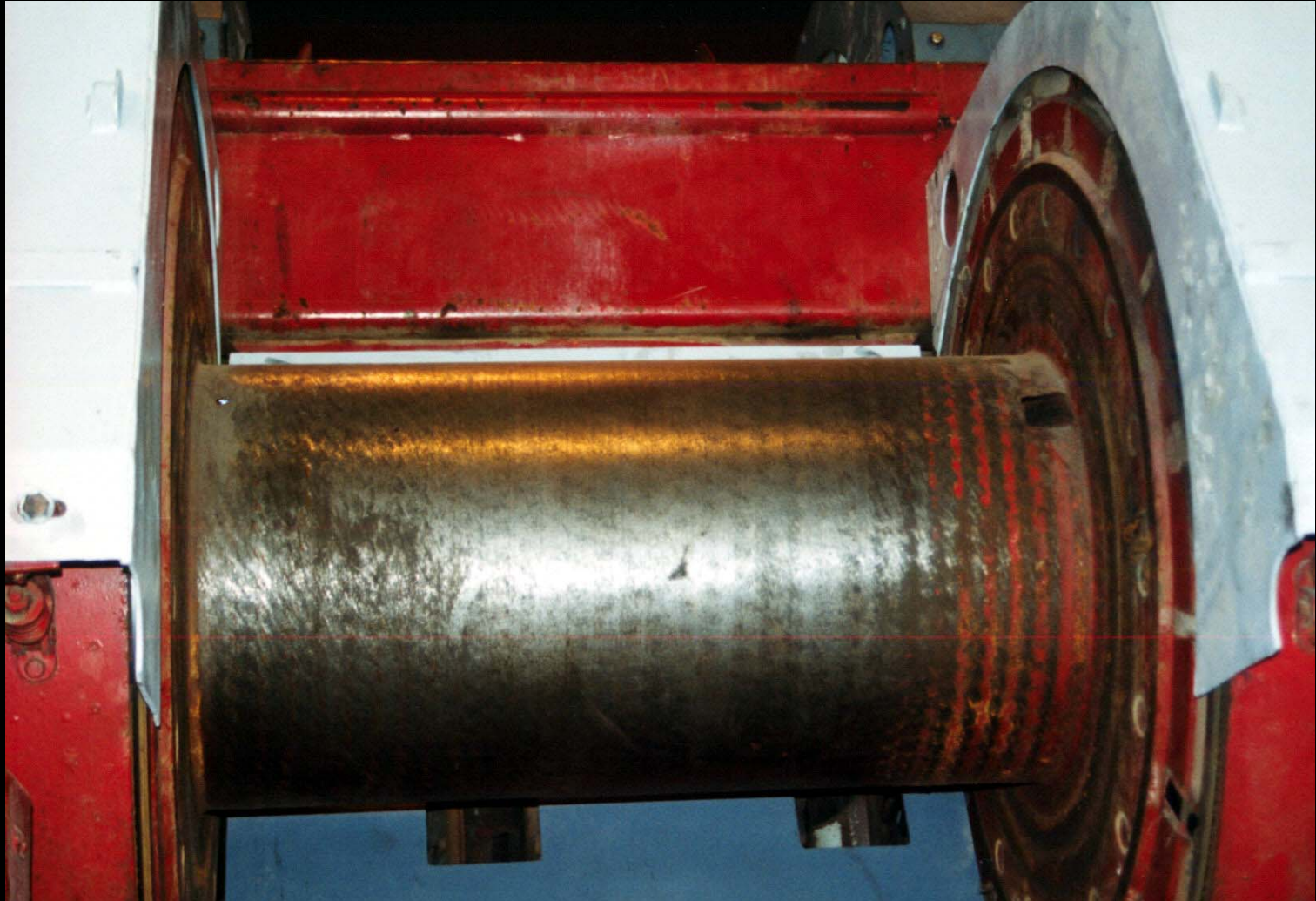
Leveling of the Crane



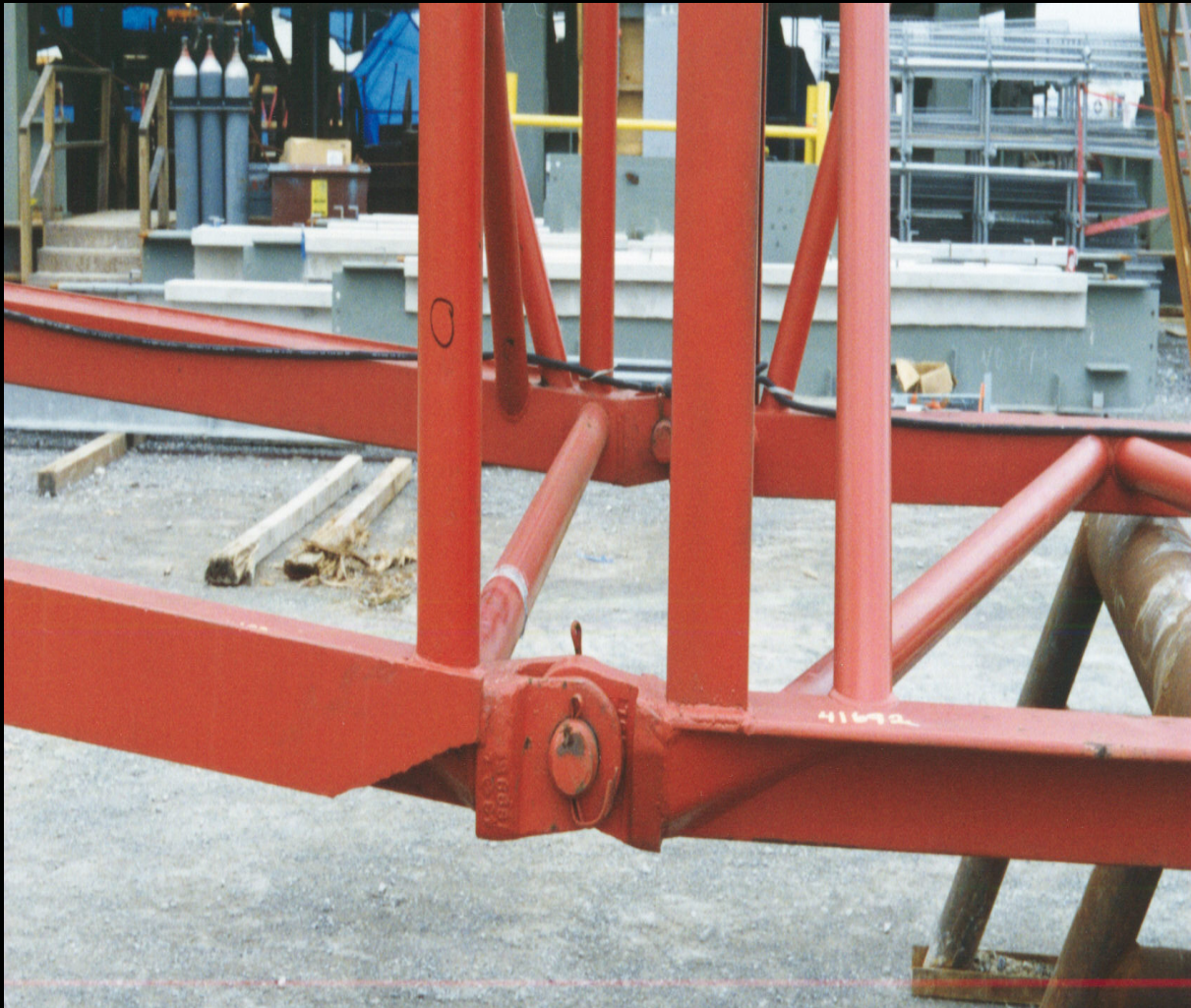
Sheaves



Drum Lagging and Flanges



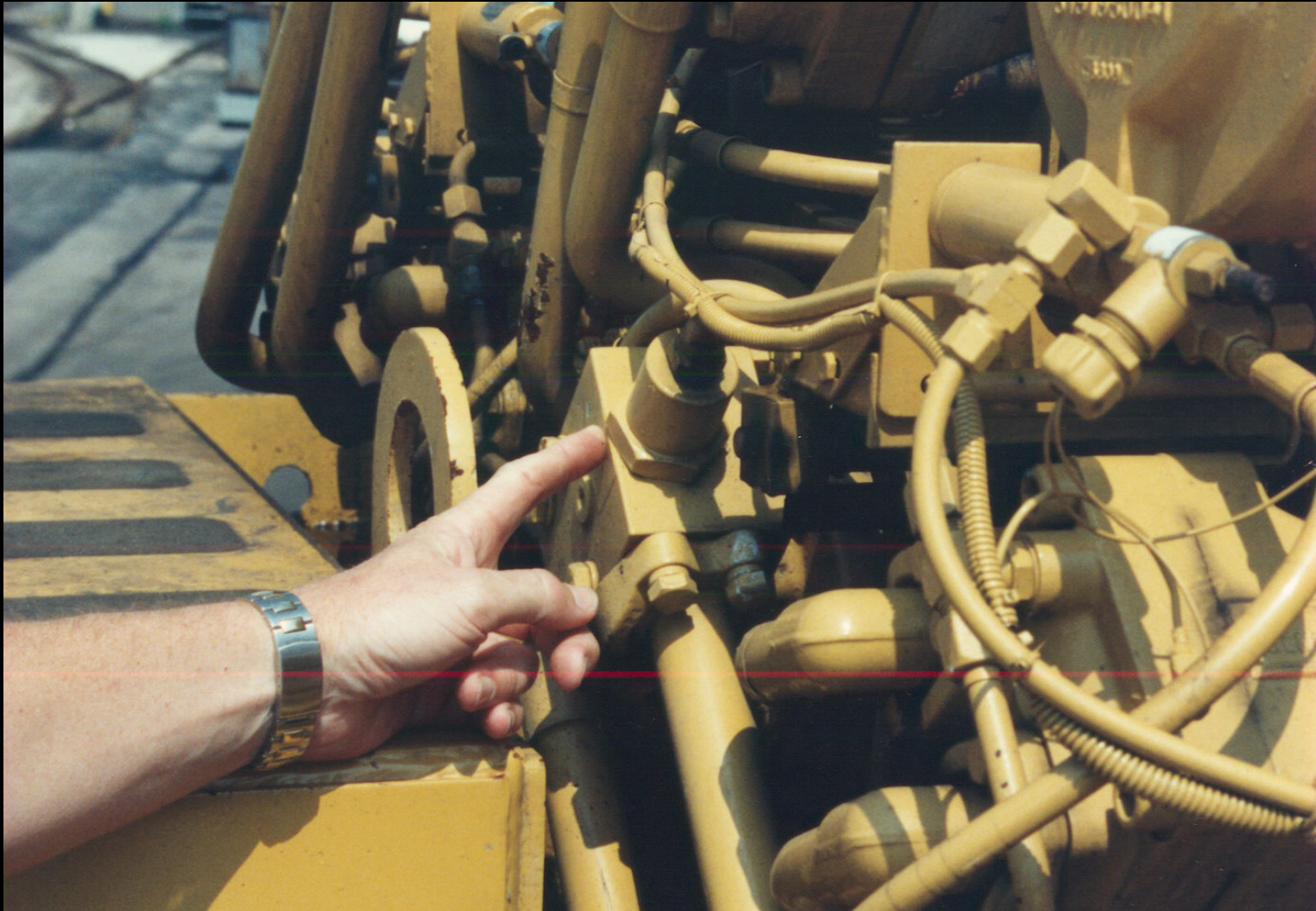
Components of the Boom Assembly





Hooks

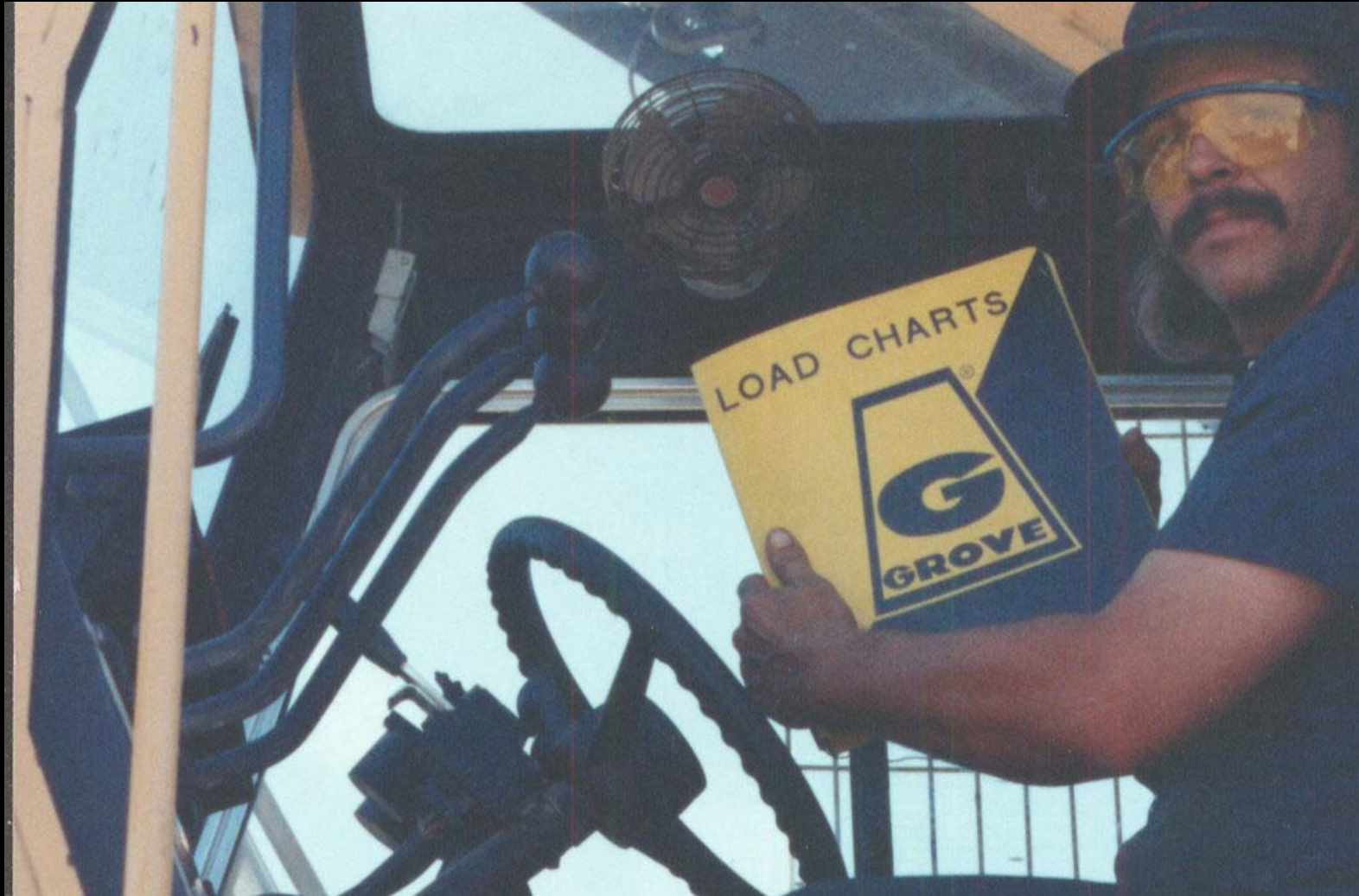
Hydraulic Hoses & Fittings,



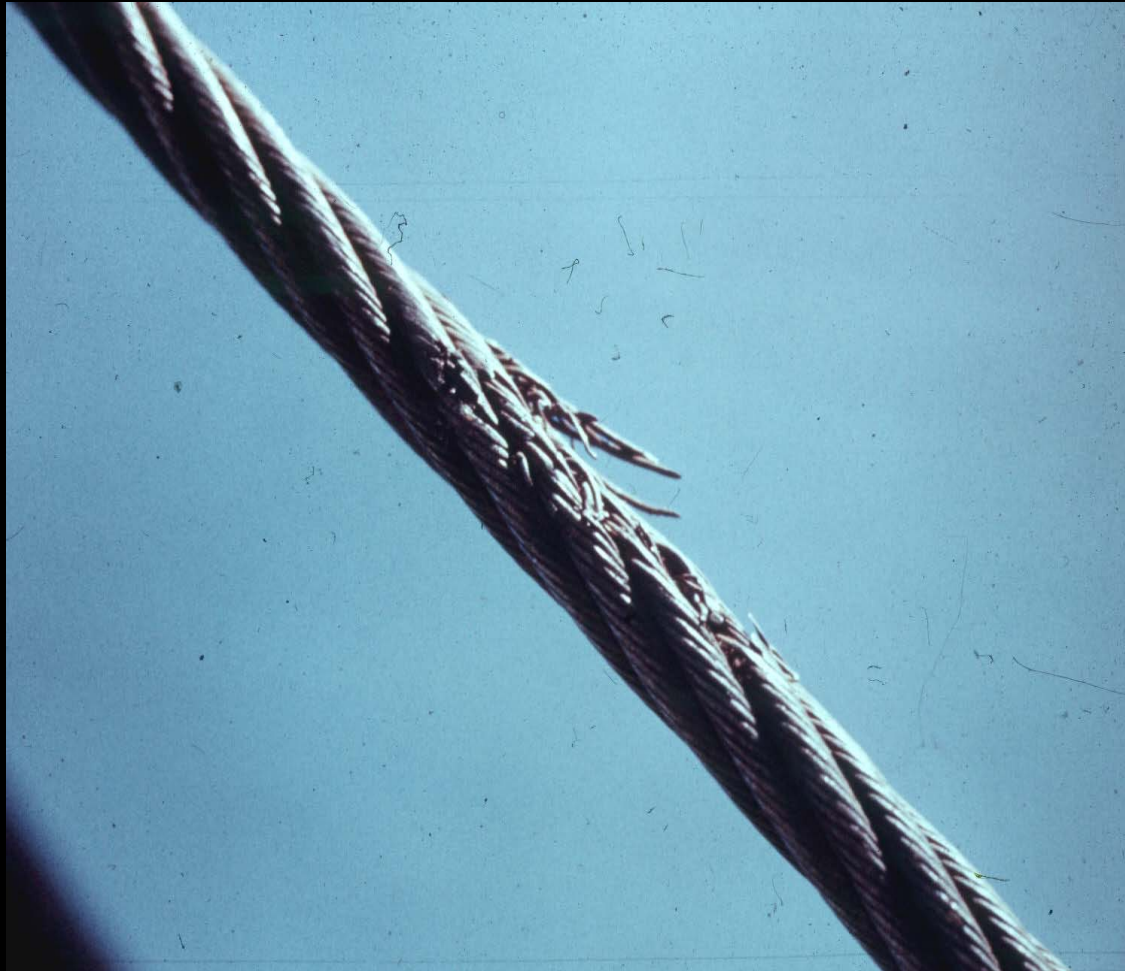
Outriggers & Beams



Load-Rating Chart



Wire Rope



Operator's Compartment



Access Ladder



Learning Opportunity

1. What are five (5) OSHA requirements concerning the inspection of mobile cranes?
2. What two (2) types of inspections must be performed on all cranes?
3. What three (3) inspection records shall be maintained monthly on critical items in use?